

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 17961 PCT	FOR FURTHER ACTION		See item-4 below
International application No. PCT/US2004/002824	International filing date (<i>day/month/year</i>) 30 January 2004 (30.01.2004)	Priority date (<i>day/month/year</i>) 03 February 2003 (03.02.2003)]	
International Patent Classification (IPC) or national classification and IPC 7 H03L 1/00, H03J 7/02			
Applicant M/A-COM, INC.			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).
 2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input checked="" type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 740 14 35	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Date of issuance of this report 05 August 2005 (05.08.2005)</td> </tr> <tr> <td style="padding: 5px;">Authorized officer Simin Baharlou</td> </tr> <tr> <td style="padding: 5px;">Telephone No. +41 22 338 71 30</td> </tr> </table>	Date of issuance of this report 05 August 2005 (05.08.2005)	Authorized officer Simin Baharlou	Telephone No. +41 22 338 71 30
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Authorized officer Simin Baharlou				
Telephone No. +41 22 338 71 30				

PATENT COOPERATION TREATY

REC'D 05 JUL 2004

WIPO

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From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2004/002824

International filing date (day/month/year)
30.01.2004

Priority date (day/month/year)
03.02.2003

International Patent Classification (IPC) or both national classification and IPC
H03L1/00, H03J7/02

Applicant
M/A-COM, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/002824

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/002824

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-19
Inventive step (IS)	Yes: Claims	
	No: Claims	1-19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.

- 1 The following document is referred to in this communication:
D1 : US 5 875 388 A (QUIRE CHRISTOPHER S ET AL) 23 February 1999
(1999-02-23)

2 NOVELTY

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of **claim 1 is not new** in the sense of Article 33(2) PCT.
Document D1 discloses (see figure 1)(the references in parenthesis applying to this document):

A radio (110) configured to transmit a radio signal having a local frequency (134), comprising: a calibration system (112) configured to automatically (i) receive (118) a reference signal having a reference frequency, (ii) compare (column 3 lines 13-17) the local frequency to the reference frequency to determine whether there is a difference between the local frequency and the reference frequency, and (iii) adjust the local frequency by an offset frequency, if the difference between the local frequency and the reference frequency is greater than a first threshold value (column 3 lines 17-20).

- 2.2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of **claim 7 is not new** in the sense of Article 33(2) PCT.
Document D1 discloses (see figure 1)(the references in parenthesis applying to this document):

A radio (110), comprising: a transmitter (132, 130, 128, 126) configured to transmit a radio signal having a local frequency (134); and a control system (112) having a selectable one of a calibration mode operable to: (i) receive (118) a reference signal having a reference frequency, (ii) compare (column 3 lines 13-17) the local frequency to the reference frequency to determine whether there is a difference between the local frequency and the reference frequency, and (iii) adjust the local frequency by an offset frequency, if the difference between the local frequency and the reference frequency is greater than a threshold value (column 3 lines 17-20); and a normal mode (column 17 lines 25-31) operable to transmit the radio

signal by continuously adjusting the local frequency by the offset frequency.

2.3 The same reasoning applies, *mutatis mutandis*, to the subject-matter of the corresponding independent **claims 12 and 16**, which therefore are also considered not new.

2.4 Dependent **claims 2-6, 8-11, 13-15, 17-19** do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty (Article 33(2) PCT), see the corresponding passages of D1 indicated in the international search report.

3 INVENTIVE STEP

3.1 As all claims lack novelty (Article 33(2) PCT), they also lack an inventive step (Article 33(3) PCT).